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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mihrimah Ozkan et al. Art Unit: 2881
Serial No.: 09/917,139 Examiner: Zia R. Hashmi
Filed : July 26, 2001
Title : MANIPULATION OF LIVE CELLS AND INORGANIC OBJECTS
WITH OPTICAL BEAM ARRAYS

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicants call attention to the attached Information
Disclosure Statement and documents listed on form PTO-1449.

This filing is being made before the receipt of a first
Office action on the merits. No fee is required.

Kindly accept this Information Disclosure Statement under
Rule 97(c)(2). The rule 17(p) certification fee of \$180 is
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Each enclosed document listed on the herewith Form PTO-1449
was cited in the attached **Type here** Search Report dated
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than three months ago. To the best knowledge of the undersigned, this is the first citation of these items in any communication from a foreign patent office in a counterpart foreign application.

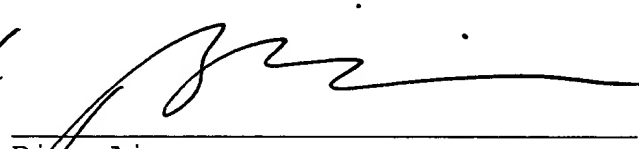
The documents are in the English language; hence no concise explanation is necessary per Rule 98(a)(3).

Consideration of the foregoing and enclosures plus the return of a copy of the enclosed form PTO-1449 with the Examiner's initials in the left column per MPEP 609 are earnestly solicited along with an early action on the merits.

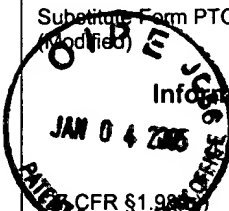
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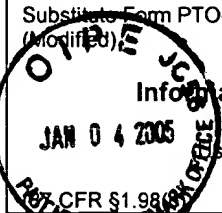
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Substitute Form PTO-1449 (modified)  Information Disclosure Statement by Applicant (Use several sheets if necessary)	U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 15670-036001	Application No. 09/917,139
	Applicant Mihrimah Ozkan et al.			
	Filing Date July 26, 2001		Group Art Unit 2881	

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	3,558,877	01/26/71	Pressman			
	AB	3,628,182	12/14/71	Ashkin et al.			
	AC	3,638,139	01/25/72	Ashkin et al.			
	AD	3,662,183	05/09/72	Ashkin et al.			
	AE	3,725,810	04/03/73	Ashkin et al.			
	AF	3,761,721	09/25/73	Altshuler et al.			
	AG	3,778,612	12/11/73	Ashkin			
	AH	3,793,541	02/19/74	Ashkin et al.			
	AI	3,808,432	04/30/74	Ashkin			
	AJ	3,808,550	04/30/74	Ashkin			
	AK	4,063,106	12/13/77	Ashkin et al.			
	AL	4,092,535	05/30/78	Ashkin et al.			
	AM	4,127,329	11/28/78	Chang et al.			
	AN	4,247,815	01/27/81	Larson et al.			
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	AR	4,390,403	06/28/83	Batchelder			
	AS	4,440,638	04/03/84	Judy et al			
	AT	4,451,412	05/29/84	Loiseaux et al			
	AU	4,453,805	06/12/84	Ashkin et al			
	AV	4,520,484	05/28/85	Huignard et al			
	AW	4,536,657	08/20/85	Bruel			
	AX	4,627,689	12/09/86	Asher			
	AY	4,632,517	12/30/86	Asher			
	AZ	4,756,427	07/12/88	Göhde			
	AAA	4,827,125	05/02/89	Goldstein			

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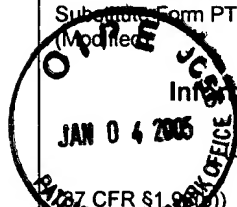
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	ABB	4,886,360	12/12/89	Finlan			
	ACC	4,887,721	12/19/81	Martin et al			
	ADD	4,893,886	01/16/90	Ashkin			
	AEE	4,908,112	03/13/90	Pace			
	AFF	5,029,791	07/09/91	Ceccon et al			
	AGG	5,079,169	01/07/92	Chu et al			
	AHH	5,100,627	03/31/92	Buican et al			
	AII	5,113,286	05/12/92	Morrison			
	AJJ	5,121,400	06/09/92	Verdiell et al			
	AKK	5,170,890	12/15/92	Wilson et al			
	ALL	5,189,294	02/23/93	Jackson et al			
	AMM	5,198,369	03/30/93	Itoh et al			
	ANN	5,206,504	04/27/93	Sridharan			
	AOO	5,212,382	05/18/93	Sasaki et al			
	APP	5,245,466	09/14/93	Burns et al			
	AQQ	5,274,231	12/28/93	Chu et al			
	ARR	5,283,417	02/01/94	Misawa et al			
	ASS	5,308,976	05/03/94	Misawa et al			
	ATT	5,327,515	07/05/94	Anderson et al			
	AUU	5,337,324	08/09/94	Ohtsu et al			
	AVV	5,338,930	08/16/94	Chu et al			
	AWW	5,343,038	08/30/94	Nishiwaki et al			
	AXX	5,355,252	10/11/94	Haraguichi			
	AYY	5,360,764	11/01/94	Celotta et al			
	AZZ	5,363,190	11/08/94	Inaba et al			
	AAAA	5,364,744	11/15/94	Buican et al			
	ABBB	5,374,566	12/20/94	Iranmanesh			

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	ACCC	5,445,011	08/29/95	Ghislain et al			
	ADDD	5,452,123	09/19/95	Asher et al			
	AEEE	5,473,471	12/05/95	Yamagata et al			
	AFFF	5,495,105	02/27/96	Nishimura et al			
	AGGG	5,512,745	04/30/96	Finer et al			
	AHHH	5,620,857	04/15/97	Weetall et al			
	AIII	5,625,484	04/29/97	Coutsomitras			
	AJJJ	5,629,802	05/13/97	Clark			
	AKKK	5,631,141	05/20/97	Sonek et al			
	ALLL	5,637,458	06/10/97	Frankel et al			
	AMMM	5,644,588	07/01/97	Misawa			
	ANNN	5,653,859	08/05/97	Parton et al			
	AOOO	5,659,561	08/19/97	Torruellas et al			
	APPP	5,674,743	10/7/97	Ulmer			
	AQQQ	5,689,109	11/18/97	Schutze			
	ARRR	5,694,216	12/02/97	Riza			
	ASSS	5,760,395	06/02/98	Johnstone			
	ATTT	5,770,856	06/23/98	Fillard et al			
	AUUU	5,773,298	06/30/98	Lynggaard et al			
	AVVV	5,776,674	07/07/98	Ulmer			
	AWWW	5,793,485	08/11/98	Gourley			
	AXXX	5,795,457	08/18/98	Pethig et al			
	AYYY	5,804,436	09/08/98	Okun et al			
	AZZZ	5,814,200	09/29/98	Pethig et al			
	AAAAA	5,858,192	01/12/99	Becker et al			
	ABBBB	5,888,370	03/30/99	Becker et al			
	ACCCC	5,900,160	05/04/99	Whitesides et al			

Date Considered

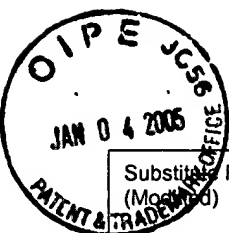
Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)  Information Disclosure Statement by Applicant (Use several sheets if necessary) 37 CFR § 1.901(a)(5)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 15670-036001	Application No. 09/917,139
	Applicant Mihrimah Ozkan et al.		
	Filing Date July 26, 2001	Group Art Unit 2881	

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ADDDD	5,919,646	07/06/99	Okun et al			
	AEEEE	5,935,507	08/10/99	Morito et al			
	AFFFF	5,939,716	08/17/99	Neal			
	AGGGG	5,942,443	08/24/99	Parce et al			
	AHHHH	5,950,071	09/07/99	Hammond et al			
	AIIII	5,952,651	09/14/99	Morito et al			
	AJJJJ	5,953,166	09/14/99	Shikano et al			
	AKKKK	5,956,106	09/21/99	Petersen et al			
	ALLLL	5,993,630	11/30/99	Becker et al			
	AMMMM	5,993,631	11/30/99	Parton et al			
	ANNNN	5,993,632	11/30/99	Becker et al			
	AOOOO	6,015,714	01/18/00	Baldarelli et al			
	APPPP	6,033,546	03/07/00	Ramsey			
	AQQQQ	6,071,394	06/06/00	Cheng et al			
	ARRRR	6,074,725	06/2000	Kennedy, Colin			
	ASSSS	6,078,681	06/20/00	Silver			
	ATTTT	6,082,205	07/04/00	Zborowski et al			
	AUUUU	6,088,097	07/11/00	Uhl			
	AVVVV	6,088,376	07/11/00	O'Brien et al			
	AWWWW	6,096,509	08/01/00	Okun et al			
	AXXXX	6,111,398	08/29/00	Graham			
	AYYYY	6,121,603	09/19/00	Hang et al			
	AZZZZ	6,139,831	10/31/00	Shivashankar et al			
	AAAAAA	6,142,025	11/07/00	Zborowski et al			
	ABBBBB	6,143,558	11/07/00	Kopelman et al			
	ACCCCC	6,149,789	11/21/00	Benecke et al			
	ADDDDD	6,159,749	12/12/00	Liu			

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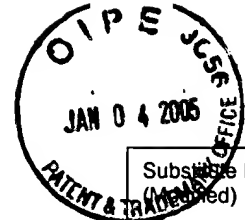


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Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Mihrimah Ozkan et al.	
		Filing Date July 26, 2001	Group Art Unit 2881

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AEEEEEE	6,197,176	03/06/01	Pethig et al			
	AFFFFF	6,208,815	03/27/01	Seidel et al			
	AGGGGG	6,215,134	04/10/01	O'Brien et al			
	AHHHHH	6,221,654	04/24/01	Quake et al			
	AIIIII	6,224,732	05/01/01	Imasaka et al			
	AJJJJJ	6,242,209	06/05/01	Ransom et al			
	AKKKKK	6,280,960	08/28/01	Carr			
	ALLLLL	6,280,967	08/28/01	Ransom et al			
	AMMMMM	6,287,758	09/11/01	Okun et al			
	ANNNNN	6,287,776	09/11/01	Hefti et al			
	AOOOOO	6,287,832	09/11/01	Becker et al			
	APPPPP	6,287,874	09/11/01	Hefti			
	AQQQQQ	6,294,063	09/25/01	Becker et al			
	ARRRRR	6,344,325	02/05/02	Quake et al			
	ASSSSS	6,399,397	06/04/02	Zarling et al			
	ATTTTT	6,488,895	12/2002	Kennedy, Colin			
	AUUUUU	6,509,085	01/2003	Kennedy, Colin			
	AVVVVV	6,514,722	02/04/03	Palsson et al			
	AWWWWW	2002/0058332	05/16/02	Quake et al			
	AXXXXX	2002/0005354	01/17/02	Spence et al.			
	AYYYYY	2002/0094533	07/18/02	Hess et al.			
	AZZZZZ	2002/0045272	04/18/02	McDevitt et al.			
	AAAAAAA	2003/0047676	03/13/03	Grier et al			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
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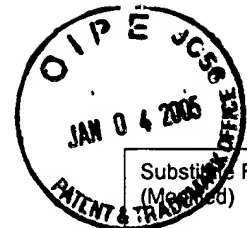
Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Substitute Form PTO-1449 (Revised)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 15670-036001	Application No. 09/917,139
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Foreign Patent Documents or Published Foreign Patent Applications								
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	ACCCCCC	99/39190	08/05/99	WO				
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	AFFFFFF	00/45160	08/03/00	WO				
	AGGGGGG	00/45170	08/03/00	WO				
	AHHHHHH	00/45179	08/03/00	WO				
	AIIIIII	94/08221	04/14/94	WO				
	AJJJJJJ	00/54882	09/21/00	WO				
	AKKKKKK	01/05514	01/25/01	WO				
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	ATTTTTT	01/68110	09/20/01	WO				
	AUUUUUU	02/22774	03/21/02	WO				
	AVVVVVV	4326181	02/09/95	DE				
	AWWWWWW	0635994	09/23/98	EP				
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	ABBBBBB	05232398	09/10/93	JP				
	ACCCCCC	06123886	05/06/94	JP				

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							Yes	No
	ADDDDDDD	06132000	05/13/94	JP				
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	AHHHHHHH	10062332	03/06/98	JP				
	AIIIIII	11218691	08/10/99	JP				

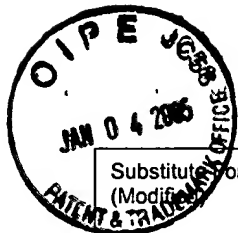
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Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AJJJJJJ	ACKERSON et al, "Radiation Pressure As A Technique For Manipulating The Particle Order In Colloidal Suspensions", Faraday Discuss. Chem. Soc., 83, 1987, 309-316
	AKKKKKKK	AFZAL et al, "Optical Tweezers Using A Diode Laser", Rev. Sci. Instrum., 63, 4, April 1992, 2157-2163
	ALLLLLLL	AMATO, "Optical Matter Emerges Under Laser", Science News, 136, 1989, 212
	AMMMMMMM	ASHER et al, "Crystalline Colloidal Bragg Diffraction Devices: The Basis For A New Generation Of Raman Instrumentation", Spectroscopy, 1, 12, 1986, 26-31
	ANNNNNNN	ASHKIN, "Acceleration & Trapping Of Particles by Radiation Pressure", Physical Review Letters, 24, 4, January 26, 1970, 156-159
	AOOOOOOO	ASHKIN, "Trapping Of Atoms By Resonance Radiation Pressure", Physical Review Letters, 40, 12, March 20, 1978, 729-732
	APPPPPPP	ASHKIN, "Forces Of A Single Beam Gradient Laser Trap On A Dielectric Sphere In The Ray Optics Regime", Biophys.J., 61, February 1992, 569-582
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	ARRRRRRR	ASHKIN et al, "Internal Cell Manipulation Using Infrared Laser Traps", Proc. Natl. Acad. Sci. USA, 86, 20, October 1989, 7914-7918
	ASSSSSSS	ASHKIN et al., "Optical Levitation By Radiation Pressure", Appl.Phys.Lett., 19, 8, October 15, 1971, 283-285
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	AVVVVVVV	BAGNATO et al, "Continuous Stopping & Trapping Of Neutral Atoms", Physical Review Letters, 58, 21, May 25, 1987, 2194-2197
	AWWWWWWW	BECKER et al, "Separation Of Human Breast Cancer Cells From Blood By Differential Dielectric Affinity", Proc. Natl. Acad. Sci. USA, 92, January 1995, 860-864
	AXXXXXXX	BERNS et al, "Use Of A Laser Induced Optical Force Trap To Study Chromosome Movement On the Mitotic Spindle", Proc. Natl. Acad. Sci. USA, 86, 12, June 1989, 4539-4543
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	AZZZZZZZ	BIEGELOW et al, "Observation Of Channeling Of Atoms In The Three Dimensional Interference Pattern Of Optical Standing Waves", Physical Review Letters, 65, 1, July 2, 1990, 29-32
	AAAAAAAAA	BLOCK et al., "Compliance Of Bacterial Flagella Measurement Without Optical Tweezers", Nature, 338, 6215, April 6, 1989, 514-518
	ABBBBBBBB	BLOCK, "Optical Tweezers: A New Tool For Biophysics", Noninvasive Techniques In Cell Biology, chap 15, 1990, 375-402. (Wiley-Liss Inc.: New York)

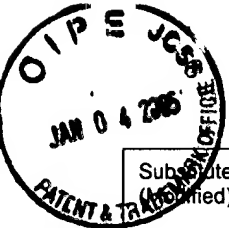
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Other Documents (include Author, Title, Date, and Place of Publication)		
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	ACCCCCCCC	BRONKHORST et al., "A New Method To Study Shape Recovery Of Red Blood Cells Using Multiple Optical Trapping", Biophys. J., 69, 5, November 1995, 1666-1673
	ADDDDDDDD	BUICAN et al., "Automated Single Cell Manipulation & Sorting By Light Trapping", Applied Optics, 26, 24, December 15, 1987, 5311-5316
	AEEEEEEEE	BURNS et al., "Optical Binding", Physical Review Letters, 63, 12, September 18, 1989, 1233-1236
	AFFFFFFFF	BURNS et al., "Optical Matter: Crystallization & Binding In Intense Optical Fields", Science, 249, 4970, August 17, 1990, 749-754
	AGGGGGGGG	BUSINESS WEEK, "Is There Anything A Laser Can't Do?", Business Week, October 30, 1989, 157
	AHHHHHHHH	BUSTAMANTE, "Direct Observation & Manipulation Of Single DNA Molecules Using Fluorescence Microscopy", Annu. Rev. Biophys. Biophys. Chem., 20, 1991, 415-446
	AIIIIIII	BUSTAMANTE et al., "Towards A Molecular Description Of Pulsed Field Gel Electrophoresis", Trends In Biotechnology, 11, 1993, 23-30
	AJJJJJJJJ	BUSTAMANTE et al., "Manipulation Of Single DNA Molecules & Measurement Of Their Persistence, Length & Charge Density Under A Fluorescence Microscope", Abst. Of the 19th Mtg. Of Annual Mtg. Of Amer. Soc. For Photobiology, 53, June 22, 1991, 46S (Pergamon Press: Oxford).
	AKKKKKKKK	CALDWELL, "Field-Flow Fractionation", Analytical Chemistry, 60, 17, September 1, 1988, 959-971
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Substitute Form PTO-1449 (Unpublished)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 15670-036001	Application No. 09/917,139
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Mihrimah Ozkan et al.	
		Filing Date July 26, 2001	Group Art Unit 2881

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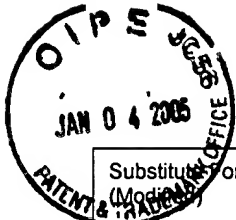
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